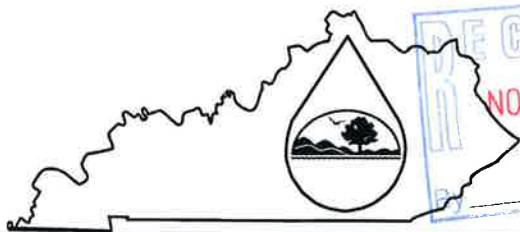


# KPDES FORM SDAA

AI  
105661



## Kentucky Pollutant Discharge Elimination System (KPDES)

### Socioeconomic Demonstration and Alternatives Analysis

The Antidegradation Implementation Procedure found in 401 KAR 10:030, Section 1(3)(b)3 requires KPDES permit applications for new or expanded discharges to waters categorized as "Exceptional or High Quality Waters" to conduct a socioeconomic demonstration and alternatives analysis to justify the necessity of lowering local water quality to accommodate important economic or social development in the area in which the water is located. This demonstration shall include this completed form and copies of any engineering reports, economic feasibility studies, or other supporting documentation

#### I. Project Information

KYG046413

Facility Name: Viking Mining, LLC.

Location: Long Fork of Virgie

County: Pike

Receiving Waters Impacted: Long Fork Creek

#### II. Socioeconomic Demonstration

##### 1. Define the boundaries of the affected community:

(Specify the geographic region the proposed project is expected to affect. Include name all cities, towns, and counties. This geographic region must include the proposed receiving water.)

Reference the attached narrative.

##### 2. The effect on employment in the affected community:

(Compare current unemployment rates in the affected community to current state and national unemployment rates. Discuss how the proposed project will positively or negatively impact those rates, including quantifying the number of jobs created and/or continued and the quality of those jobs.)

Reference the attached narrative.

## **II. Socioeconomic Demonstration- continued**

### **3. The effect on median household income levels in the affected community:**

(Compare current median household income levels with projected median household income levels. Discuss how proposed project will positively or negatively impact the median household income in the affected community including the number of households expected to be impacted within the affected community.)

Reference the attached narrative.

### **4. The effect on tax revenues of the affected community:**

(Compare current tax revenues of the affected community with the projected increase in tax revenues generated by the proposed project. Discuss the positive and negative social and economic impacts on the affected community by the projected increase.)

Reference the attached narrative.

## **II. Socioeconomic Demonstration- continued**

**5. The effect on an existing environmental or public health in affected community:**

(Discuss how the proposed project will have a positive or negative impact on an existing environmental or public health.)

Reference the attached narrative.

**6. Discuss any other economic or social benefit to the affected community:**

(Discuss any positive or negative impact on the economy of the affected community including direct and or indirect benefits that could occur as a result of the project. Discuss any positive or negative impact on the social benefits to the community including direct and indirect benefits that could occur as a result of the project.)

Reference the attached narrative.

### **III. Alternative Analysis**

#### **1. Pollution prevention measures:**

(Discuss the pollution prevention measures evaluated including the feasibility of those measures and the cost. Measures to be addressed include but are not limited to changes in processes, source reductions or substitution with less toxic substances. Indicate which measures are to be implemented.)

Reference the attached narrative.

#### **2. The use of best management practices to minimize impacts:**

(Discuss the consideration and use of best management practices that will assist in minimizing impacts to water quality from the proposed permitted activity.)

Reference the attached narrative.

#### **3. Recycle or reuse of wastewater, waste by-products, or production materials and fluids:**

(Discuss the potential recycle or reuse opportunities evaluated including the feasibility of implementation and the costs. Indicate which of, of these opportunities are to be implemented)

Reference the attached narrative.

### **III. Alternative Analysis - continued**

#### **4. Application of water conservation methods:**

(Discuss the potential water conservation opportunities evaluated including the feasibility of implementation and the costs. Indicate which of, of these opportunities are to be implemented)

Reference the attached narrative.

#### **5 Alternative or enhanced treatment technology:**

(Compare feasibility and costs of proposed treatment with the feasibility and costs of alternative or enhanced treatment technologies that may result in more complete pollutant removal. Describe each candidate technology including the efficiency and reliability in pollutant removal and the capital and operational costs to implement those candidate technologies. Justify the selection of the proposed treatment technology.)

Reference the attached narrative.

### III. Alternative Analysis - continued

**6. Improved operation and maintenance of existing treatment systems:**

(Discuss improvements in the operation and maintenance of any available existing treatment system that could accept the wastewater. Compare the feasibility and costs of improving an existing system with the feasibility and cost of the proposed treatment system.)

Reference the attached narrative.

**7. Seasonal or controlled discharge options:**

(Discuss the potential of retaining generated wastewaters for controlled releases under optimal conditions, i.e. during periods when the receiving water has greater assimilative capacity. Compare the feasibility and cost of such a management technique with the feasibility and cost of the proposed treatment system.)

Reference the attached narrative.

### III. Alternative Analysis - continued

#### 8 Land application or infiltration or disposal via an Underground Injection Control Well

(Discuss the potential of utilizing a spray field or an Underground Injection Control Well for shallow or deep well disposal. Compare the feasibility and costs of such treatment techniques with the feasibility and costs of proposed treatment system.)

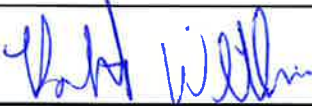
Reference the attached narrative.

#### 9 Discharge to other treatment systems

(Discuss the availability of either public or private treatments systems with sufficient hydrologic capacity and sophistication to treat the wastewaters generated by this project. Compare the feasibility and costs of such options with the feasibility and costs of the proposed treatment system.)

Reference the attached narrative.

**IV Certification:** I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and Title:	Robert Williams - Member	Telephone No.:	(606)791-0100
Signature:		Date:	

KPDES (SDAA)  
VIKING MINING, LLC.  
PERMIT NO. 898-0828

## **Section II - Socioeconomic Demonstration**

**1.) The permittee is proposing to contour, auger and or highwall mine the Whitesburg, Hazard #4 and the Taylor seams. The proposed operation will be confined to a small region since the operation will involve a small surface contour area. The proposed surface disturbance related to the operation will be limited Abel Tackett Fork and one un-named watershed that discharges into Long Fork Creek of Virgie located in Pike County Kentucky. The proposed surface area and auger or highwall miner permit boundary will encompass approximately 144.19 surface acres and 249.00 auger/highwall miner acres.**

**2.) According to the Kentucky Office of Employment and Training (Labor Market Information/unemployment rates) the unemployment rate for Pike County, Kentucky was 11.4% in August of 2009 as compared to the state unemployment of 10.8% and also compared to the National unemployment rate of 9.6%. Based on an ever declining economic market, any introduction of jobs locally will render a positive impact on the local economy. This proposed mine will employ approximately 30 personnel to maintain the mine site for approximately 2 years. These will be newly created jobs consisting of locals from the area and neighboring communities. In addition to the 30 new jobs created, ancillary positions, such as drivers, vendors and suppliers will also be needed by the applicant. However, if for any reason the construction of this new mine site is not approved due to the various required permits within the 1st. quarter of 2010, the mine site will not be able to begin based on the scheduled financial plan of the applicant. If the mine site is not under construction within the 1st. quarter of 2010, the money will be lost and the mine site will be abandoned which will result in the 30 jobs never being created. The employment of the 30 persons will have a positive impact on the local economy by being able to introduce money into local businesses such as eating at local restaurants, buying fuel for local travel and buying clothing and everyday essentials detrimental to their livelihood. If the coal market begins to expand this will enable the applicant to expand operations, which would increase the need for more workers to help meet the demand for the coal market orders that feed the power plants to provide our power and energy to sustain life.**

**3.) Based on the USDA Economic Research Service for 2007, the median household income for Pike County is \$32,382 as compared to the state and nation respectively, \$40,299 and \$50,740. Based on the provided income levels, the proposed operation will positively impact the local community and business. The anticipated median income for the miners is between \$45,000 and \$50,000 dollars per year as compared to the average median income of \$32,382 which would substantially increase the local economy and workers. As discussed above, there will be approximately 30 workers/households that will be affected by this mine site in the area. Also the need of ancillary positions, such as drivers, vendors, and suppliers will also benefit the local economy. The number of households affected by the ancillary positions is hard to predict not knowing the skill and education of the local**



residents; however, there are approximately 250 plus households along the perimeter of the proposed permit boundary. It would seem certain of those 250 plus households, some of those could fill the ancillary positions.

4.) Currently the main tax revenue regarding coal mining would be the coal tax severance for the leading coal counties in Kentucky. Pike County is one of the leading counties that would serve to gain from more coal being produced in their community and county. Based on 2007 numbers, Pike Counties Gross Value of Severed Coal is \$1,061,847,049 (coaleducation.org). This would place Pike County in the top five of the leading coal producing counties. The local communities and county as large would only benefit from another producing operation. The money generated from the coal severance tax goes back into the communities to repair roads, better education, etc. Currently the Kentucky severance tax is 4.5% of sales. Also the imposition of the coal excise tax based on Section 4121 of the Internal Revenue Code imposes an excise tax on domestically produced coal. There are two different tax rates based on the method of coal removal. Since this is a surface and underground operation, the excise tax will be \$0.50/ton for all surface coal and \$1.00/ton for all underground coal produced. The taxes collected from the coal being produced are deposited to the black lung disability trust fund to finance payments of black lung benefits to afflicted miners.

There is a reclamation tax that is applied to the amount of coal that is removed from the mine. That rate is \$0.35/ton of coal that is produced.

These numbers are based on coal currently being priced at \$50/ton and the estimated coal to be produced from the life of this mine is 839,232 tons.

#### Surface coal

Federal Excise Tax at \$0.50/ton = \$127,584

Reclamation Tax at \$0.35/ton = \$89,308.80

Ky Severance Tax at \$2.25/ton = \$574,128

#### Underground coal

Federal Excise Tax at \$1.00/ton = \$584,064

Reclamation Tax at \$0.35/ton = \$204,422.40

Ky Severance Tax at \$2.25/ton = \$1,314,144

The numbers generated from the proposed mine site will produce a small increase in the tax generated numbers.

Additional social and economic impacts on the affected communities by this mine will be related to the preventing of an increase in the jobless rate and the positive return to the community by way of state and federal taxes. Based on the salary of \$50,000 per year per household, the federal income tax paid per person will be approximately \$2,500. The estimated payroll taxes and social security paid per person would be \$6,000 and medicare estimated at \$1,500.

The only negative impact would be if this mine project is not started as scheduled. If the project fails to start and is abandoned, the negative impact would be the loss of the proposed incomes and the added stimulation to the local economy by this mine.

5.) The negative environmental impacts as a result of this mining operation will be minimal and restricted to a small surface area (144.19 acres). Since this mine will consist of mining area, one small non-jurisdictional fill area along with one existing off-bench pond and 9 small on-bench ponds the impacts will be minimal to the already past mine related disturbances within the watersheds proposed. The initial impact may seem negative but the overall impact will be positive once mining is complete and all areas have been repaired as required by the Division of Mine Reclamation and Enforcement along with the guidance of the Division of Mine Permits. The existing mine site has existing pre-law high wall, previous gas well disturbances, and previous logging activities therefore reducing aquatic life. When the area has been reclaimed and vegetation is established this will eliminate all of the negative affects of un-reclaimed previous disturbances therefore increasing the natural habitat for aquatic life.

In years past mining operations would at times cause dust problems to the surrounding environment. However, since the early years of mining and haulage of coal with large trucks, the state has implemented laws and regulations regarding the dust related to the mine sites. The permittee will follow the detailed dust fugitive control plan outlined in the Division of mine permits MPA-03 (Item 33 forms). With these regulations in place the control of dust at the mine site will be greatly reduced which will in turn produce a more clean air to the surrounding area avoiding any public health problems.

6.) The majority of the economic impacts will be related to the actual coal production and the results of the coal tax benefits as discussed in Item 4. Also as discussed regarding income and tax generation, the permittee brings a social awareness regarding the effect of their work to the environment. The permittee is well aware of other companies' recklessness towards the environment with their mining methodology, however with voluntary input and awareness of the adjacent states mining problems, the permittee wants to promote a positive successful mining operation to the local community that will benefit all that is associated with it.

### **Section III - Alternative Analysis**

1.) The proposed mine operation would propose two (2) potential pollution problems. The first being a dust potential that would be related to the heavy vehicles traveling over the haul road from the main public access to the mine areas. The second potential pollution problem would be related to the noise of the vehicles and the machinery located at the mine site.

The possible dust pollution preventive measures have been evaluated. As discussed above the majority of the dust pollution will be related to vehicular traffic on the haul road from the mine area to the public access road. One of the options to prevent dust would be to

either pave or concrete the proposed haul road. The cost of pavement vs. concrete is as follows:

Road Length = 9,714 feet (1.84 miles)

Road Width = 150 feet

DGA Roadbed Thickness = 2 feet

Thickness of material = 1 foot

Current cost of concrete per cubic yard = \$95/cubic yard

Current cost of pavement per ton = \$90/ton

Current cost of DGA = \$450/ton

**Concrete + DGA:**

Concrete = (9714 ft. X 150 ft X 1ft.)/27 = 53,967 cu. yds.

53,967 cu. yds. @ \$95/cu. yds. = \$5,126,865

DGA = (9714 ft. X 150 ft. X 2ft.) = 2,914,200 cubic feet converts to 218,565 tons

218,565 tons @ \$350/ton = \$76,497,750

Total concrete cost = \$81,624,615

**Pavement + DGA:**

Pavement Area = 9,714 ft. X 150 ft.)/9 = 161,900 square yards

12 inches in a foot with density of pavement @ 110 in/lbs

[161,900 X (12 X 110)]/2000 = 106,854 tons @ \$90/ton = \$9,616,860

Pavement + DGA amount (same as above) = \$86,114,550

As seen the cost to either pavement or concrete the road is extremely expensive and the economic cost would make the mine not feasible. The dust potential will be addressed and controlled as the Department of mine permits (DMP) requires and addressed in the full application submitted to the DMP. The permittee has a large wheeled vehicle that is capable of cleaning the road via sweeper and/or vacuum when the road needs cleaning.

The second potential pollution is related to the noise from the mine site. One option would be to enclose the permitted area with a large fence with noise dampening capability. The perimeter length is approximately 12,607 linear feet or 2.29 miles. To construct a 24 feet high noise dampening wall is estimated as follows:

Length = 12,607 LF

Height = 24 feet

Cost of \$2,700 per 30 foot section

$12,607/30 = 420.23$  sections @ \$2,700 = \$1,134,621

Required steel ties = \$2 per section =  $\$2 \times 420.23 = \$840.46$

Concrete required for posts = 420.23 @ 3 feet deep and 1 foot diameter

Concrete =  $(3\text{ft.} \times 0.785 \text{ ft}^2) / 27 = 0.10$  cubic yards

$420.23$  posts  $\times 0.10 \times \$95$  per cu. yd. = \$3,992.19

Labor to install by local contractor = 3 man crew @ \$200/hr. @ 8 hours per day  $\times 105$  days

$\$200 \times 8 \text{ hrs} \times 105 \text{ days} = \$168,000$  plus rental equipment @ \$70,000 for 105 days

Total cost = \$1,377,453.65

As seen above the cost of the fence is high and also the site of a 24 feet high wall would be unaesthetic to the surrounding. However, since the proposed mine site is located in a semi secluded area, the impacts of the possible pollution hazards are very minimal.

2.) The permittee will implement Best Management Practices (BMP) where feasible. The Division of Mine Permits recommends several BMP's for applicants to utilize to minimize the effects of the proposed mining to the environment. Some of the BMP's that are proposed but not limited to are:

Basins

Diversion Ditches

Filter Strips

Land Grading and reshaping

Minimization of surface disturbance

Placement of Rip-Rap

Rock Check Dams

Silt Fences

Straw bale barriers

Work in periods of no or low flow or dry weather

Viking Mining, LLC., is proposing General Permit coverage for this permit for the following reasons:

Normal operating procedures that are incorporated when contour mining occurs include placement of on-bench sediment control in areas of disturbance and in some cases in-stream sediment control (in this case the in-stream pond is already built and ready for use). Ponds are designed to provide an effluent limit not to exceed 0.50 mg/l. However, due to normally constrained conditions, the effluent limit is normally designed to very near the maximum limit.

For this particular instance, Viking Mining proposes to take additional precautions to ensure that the main stream in this area, which is Long Fork Creek is not adversely affected. Those additional precautions are outlined in the following "Enhanced BMP".

### **ENHANCED BMP**

The permittee is offering an enhanced BMP plan to be implemented at this mine site Permit No. 898-0829 to further ensure that the discharge from the mine site will not significantly add or change the existing conditions of the surrounding environment. The surface area affected by this permit is limited to 144.19 surface acres which includes 9,714 feet of existing haul road. The small size of the area affected in addition to the location of the ponds will aid in protection of the stream. Further, any slope areas that are created will be immediately revegetated and any flat areas created will be promptly covered with limestone gravel surfaces. The permittee has explored the possibility of moving ponds further up-stream, however all sediment control structures are proposed out of natural drainage patterns with the exception of one existing pond in-stream built and used by other mining operations in this area. All of the sediment control structures have been placed in the most practical area to minimize the effects of construction while maximizing the efficiency of the proposed sediment structures. All sediment control structures were designed to be less than the DMP required effluent limit of 0.50 mg/l. The effluent values for all the sediment control structures proposed on this project indicates a very low sediment percentage as part of the overall discharge from the sediment structure. The placement of the sediment control structures will ensure that the premining and during mining discharge from the watershed will virtually be unaffected. The pre-mining discharge run as provided to the Division of Mine Permits as part of the permit application for each proposed sediment control structure proves that when compared to the during mining discharge run the during mining actually proves to be the lower discharge rate or they are within 1 to 2 percent of each other.

In addition to the above discussed sediment structures benefits, the permittee will install straw bale dikes directly below the discharge point of each sediment control structure. The permittee will also use straw bale dikes at the end of each diversion ditch where each ditch meets the pond this will increase sediment trap efficiency. All diversion ditches will be vegetated as soon as they are built to help increase travel time to each sediment control structure. Under normal conditions, ponds would be dipped once the sediment level reached an elevation 1 foot below the principal spillway. However, under this enhanced BMP, the pond will be dipped on a more conservative basis thus preventing the possibility of releasing increased amounts of sediment into Long Fork Creek.

- 3.) There is not a processing facility proposed with this surface mining permit. The storm water runoff collected in the sediment structures may be used for dust suppression of the surface disturbance area. This requires approximately 4000 gallons/day for watering of roads and mine areas. Storm water may also be used with the hydroseeding process but the amount is very minimal. Water cannot be reused for land applications on slopes that are greater than 6% and the surrounding site is greater than the 6% cutoff. The sediment structures will serve as alternative

water sources for overall dust control and will conserve the use of stream water at all times which is critical to local streams.

4.) Typical water usage at this mine operation would be the use by the employees at the mine office, watering of the haul/access road and watering of the mining area. As discussed above the usage of the water at the mine site will be approximately 4000 gallons required per day for dust control of the roads and the mine area. Typical cost to retrieve water from a hydrant is \$6 per 1,000 gallons of water. Also the cost of a storage tank of that size is estimated at \$25,000. That would result in a cost of \$59,560 for the life expectancy of the mine operation. If the permittee has to allot that amount of cost for water consumption then the permittee would have to remove that cost somewhere else in their budget for the mine site. The first place the permittee would look at in removing cost would be either personnel or eliminating some of the ancillary people in the local community.

The other most cost effective and water conservation friendly option is the use of the proposed sediment structures as the means of water source. The use of the sediment structures eliminates the use of the local stream especially during dry flow periods. The materials used for the construction of the sediment structures are the earthen material at the site which blends with the surrounding environment. The cost to construct a sediment structure is approximately \$5,000 per sediment structure for a total of \$45,000 as compared to the \$59,560 for the daily bought water.

5.) Based on similar projects for the permittee in the same county, alternative analysis are very similar for mining operation for each mine site for the permittee. Since they are under the umbrella of the same company, their daily operations from mine site to mine site are very similar.

Underground mining was considered as an alternative to surface mining. However, the area proposed cannot be underground mined in that the seams are too thin to underground mine.

There are some wastewater treatment options currently available for the treatment and removal of settleable solids from the stream to meet effluent requirements. These include reverse osmosis filtration, a system of thickeners and vacuum filters, sedimentation boxes, sedimentation ponds, sediment ditches, filter fabrics, straw bales, etc. Diversion ditches, sediment fence, and/or sediment structures are generally the methods of choice when following the regulatory and industry BMP's.

Wastewater treatment plant software was used to estimate similar projects for the permittee and those same costs have been applied to this application. Using only a preliminary treatment process (mechanical screening) since the discharge is stormwater and solids are the primary pollutant of concern, the project cost would be \$14.2 million which includes the engineering design fee (\$1.5 million), lab and administration building (\$1.7 million), interest during construction (\$1.1 million), total cost of \$140,000/year, maintenance costs of \$14,000/year, energy cost of \$5,000/year, and etc.

The software did not allow for a cost estimation of final disposal or removal of the plant but an allowance of 10% of the total project cost can be factored in. The cost of this alternative is prohibitive.

The most cost effective treatment on site for the surface runoff is the required DMP sediment structures. The DMP requires that all surface runoff within the permit boundary be controlled by diversion ditches and sediment structures which have to retain the surface water runoff for the mine site until it reaches the required effluent of 0.50 mg/L or less. A computer software program called SEDCAD aids in the design and sizing of the sediment structures. Typically the water that is discharged from these sediment structures does not have any type of domestic use. The only use as discussed above is using the water to control dust and in some cases landowners, typically farming related, may use the water for their live stocks.

6.) There are no existing treatment facilities to upgrade near the immediate area of the mine area. The nearest known water treatment facility is near the city of Pikeville which is approximately 35 miles from the project site. Even if the existing water treatment facility could be upgraded to handle the proposed discharge from the mine site, the cost of either constructing pipe for 35 miles and/or hauling the discharge the 35 miles to the water treatment plant.

The total length across the 35 miles is 184,800 feet. The current cost for pipe to carry the mine water is approximately \$100/LF which could equate to \$18,480,000 dollars for the pipe material alone not including the labor cost and the money to obtain easements from all the landowners affected along that 35 miles of road is uneconomical.

The capacity of the typical water truck (\$100,000) that could be used for the haulage of the mine water is 4,000 gallons. The estimated truck mileage rate is 10 miles/gallon with gas currently at \$2.50/gallon. The round trip for the truck to the water treatment plant and back is 70 miles. The mine site would discharge approximately 20,000 gallons per day. That would equate to 5 trips a day at 70 miles would be 350 mile per day. That would be 35 gallons per day at \$2.50/gallon for a total of \$87.50/day for 2 years would be \$63,875.00 not including maintenance to the truck to if the truck would need to be replaced. Adding the cost of the truck and the haulage rate the total of this option would be \$165,875.00 which is not feasible for the project.

7.) As required by DMP, the permittee is required to construct water retaining detention structures to control the sediment load and surface runoff discharge to the surrounding area. The sediment structures are sized and designed as such to control the discharge via straight pipes and/or emergency spillways to allow for enough settling time for the sediment solids to settle out before discharge. The discharge rate is dictated by the designed spillways. The release of the water is maintained by nature itself verses some mechanical release. These ponds are designed to maintain a 10 yr./24 hour storm event. The proposed structures associated with this permit will be constructed in solid material to avoid any failure in the dam to ensure safety downstream. Other above ground sediment structures have the possibility of failure

which could cause a sudden release of water to the residents downstream of the project area. If the permittee had to construct sediment structures to maintain even more water on site to hold the required amount per day, the size of these structures would probably triple in size which would introduce construction of the dam structures on the surface of the ground. This would open the possibility of dam failure. Also, the permittee does not have the area to construct those large holding ponds in the small watershed. Also the enlargement of the ponds would disturb more area and also affect more of the stream. The cost of the construction of the ponds would not be such an important factor as compared to the public safety at large and the environmental impacts to the land for needing larger retention ponds.

8.) There are several old mines (surface and underground) that are abandoned within and adjacent to the project site. The underground works could be used for subsurface injection. All together the old abandoned mines cover approximately 350 acres. Assuming a 60% recovery and four (4) feet void height, the void volume in these old mine works is 840 acre-ft. Assuming a flow rate of 2.5 cfs from Long Fork Creek, the discharge is more that 78 million cubic feet per year. However in order for this mine to discharge water into old deep mine works the permittee would need to obtain a UIC permit which would cost approximately \$25,000. This option of disposal would be more cost effective verses construction of on site water treatment plant or trucking the water to a treatment plant, but the project area does not have enough storage to maintain the required volume; therefore, making this option not viable.

9.) The nearest know wastewater treatment facility is near Pikeville located approximately 35 miles. The total length across the 35 miles is 184,800 feet. The current cost of pipe to carry the wastewater is approximately \$100/LF which would equate to \$18,480,000 dollars for the pipe material alone not including the labor cost and the money to obtain easements from all the landowners affected along that 35 miles or road. The capacity of the typical water truck (\$100,000) that could be used for the haulage of the mine water is 4,000 gallons. The estimated truck mileage rate is 10 miles/gallon with gas currently at \$2.50/gallon. The round trip for the truck to the water treatment plant and back is 70 miles. The mine site would discharge approximately 20,000 gallons per day. That would equate to 5 trips a day at 70 miles would be 350 mile per day. That would be 35 gallons per day at \$2.50/gallon for a total of \$87.50/day for 2 years would be \$63,875.00 not including maintenance to the truck to if the truck would need to be replaced. Adding the cost of the truck and the haulage rate the total of this option would be \$165,875.00 which is not feasible for the project.